4/23/2020

DBMS – Final Project

Group # : 7

Team Members:

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- Anupama Kamepalli (11410504)

SQL Workspace Name: anupamadbms
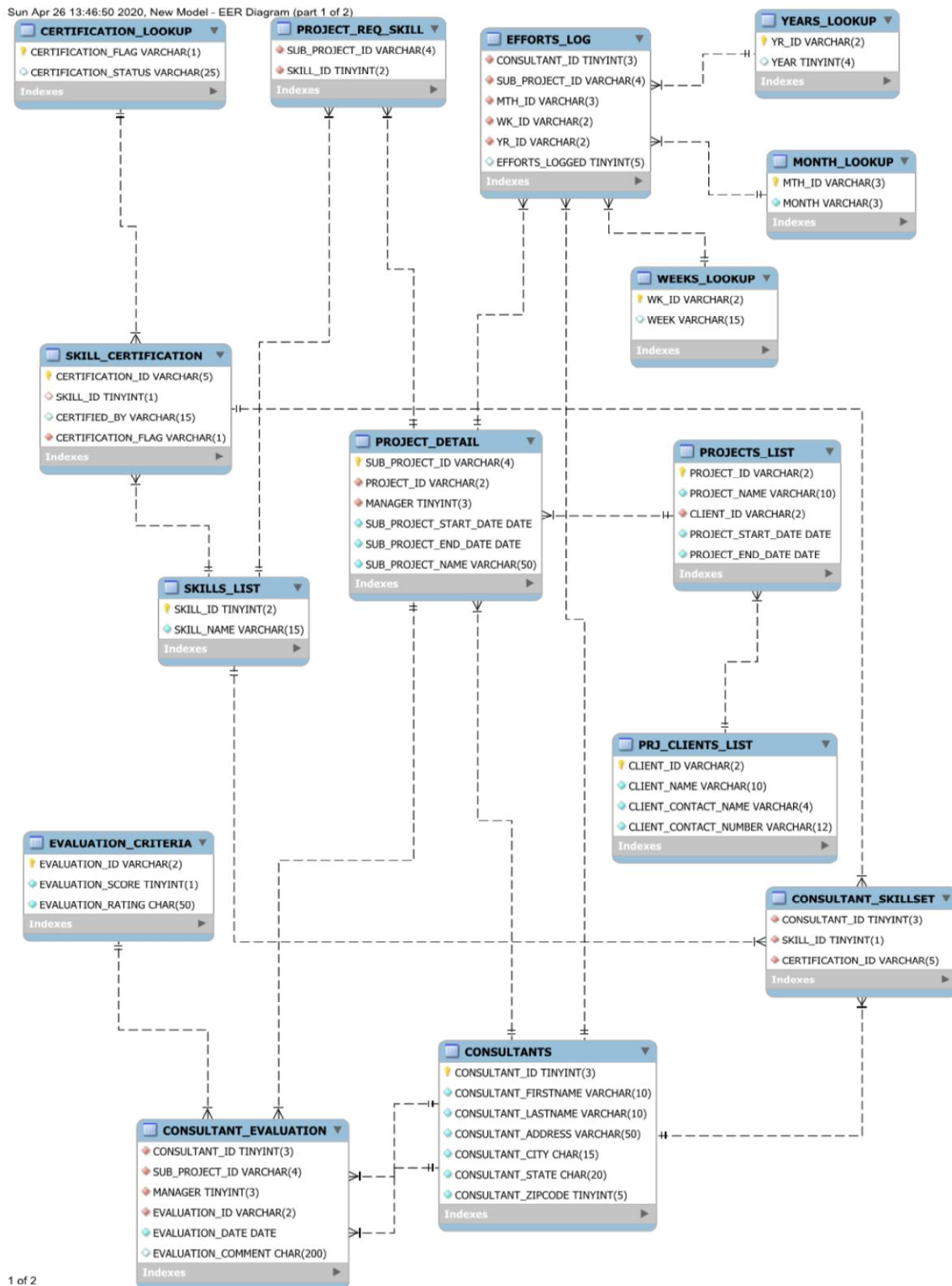
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Submitted by
anupama kamepalli

Question -1 : Cover page has Team Details and ApexuserID

Question -2 : ER Diagram.

Sun Apr 26 13:46:50 2020, New Model - EER Diagram (part 1 of 2)

1 of 2

Question -3 : SQL codes for creating all tables (with all PK and FK constraints specified).

01) **CONSULTANTS**
```
CREATE TABLE  "CONSULTANTS"
   (       "CONSULTANT_ID" NUMBER(3,0) NOT NULL ENABLE,
   "CONSULTANT_FIRSTNAME" VARCHAR2(10) NOT NULL ENABLE,
   "CONSULTANT_LASTNAME" VARCHAR2(10) NOT NULL ENABLE,
   "CONSULTANT_ADDRESS" VARCHAR2(50) NOT NULL ENABLE,
   "CONSULTANT_CITY" CHAR(15) NOT NULL ENABLE,
   "CONSULTANT_STATE" CHAR(20) NOT NULL ENABLE,
   "CONSULTANT_ZIPCODE" NUMBER(5,0) NOT NULL ENABLE,
    CONSTRAINT "CONSULTANT_PK" PRIMARY KEY ("CONSULTANT_ID")
   USING INDEX  ENABLE
   )
/
```

02) **SKILLS_LIST**
```
CREATE TABLE  "SKILLS_LIST"
   (      "SKILL_ID" NUMBER(2,0) NOT NULL ENABLE,
          "SKILL_NAME" VARCHAR2(15) NOT NULL ENABLE,
           CONSTRAINT "PRJ_SKILLS_LIST_PK" PRIMARY KEY ("SKILL_ID")
            USING INDEX  ENABLE
    )
/
```

03) **PRJ_CLIENTS_LIST**
```
CREATE TABLE  "PRJ_CLIENTS_LIST"
   (      "CLIENT_ID" VARCHAR2(2),
          "CLIENT_NAME" VARCHAR2(10) NOT NULL ENABLE,
          "CLIENT_CONTACT_NAME" VARCHAR2(4) NOT NULL ENABLE,
          "CLIENT_CONTACT_NUMBER" VARCHAR2(12) NOT NULL ENABLE,
           CONSTRAINT "CLIENTS_LIST_PK" PRIMARY KEY ("CLIENT_ID")
           USING INDEX  ENABLE
    )
/
```

04) **PROJECTS_LIST**
```
CREATE TABLE  "PROJECTS_LIST"
   (      "PROJECT_ID" VARCHAR2(2) NOT NULL ENABLE,
          "PROJECT_NAME" VARCHAR2(10) NOT NULL ENABLE,
          "CLIENT_ID" VARCHAR2(2) NOT NULL ENABLE,
          "PROJECT_START_DATE" DATE NOT NULL ENABLE,
          "PROJECT_END_DATE" DATE NOT NULL ENABLE,
           CONSTRAINT "PRJ_PROJECTS_LIST_PK" PRIMARY KEY ("PROJECT_ID")
    USING INDEX  ENABLE
   )
/
ALTER TABLE  "PROJECTS_LIST" ADD CONSTRAINT "PRJ_PROJECTS_FK" FOREIGN KEY ("CLIENT_ID")
   REFERENCES  "PRJ_CLIENTS_LIST" ("CLIENT_ID") ENABLE
/
```

05) **PROJECT_DETAIL**
```
CREATE TABLE  "PROJECT_DETAIL"
   (     "SUB_PROJECT_ID" VARCHAR2(4) NOT NULL ENABLE,
         "PROJECT_ID" VARCHAR2(2) NOT NULL ENABLE,
         "MANAGER" NUMBER(3,0) NOT NULL ENABLE,
         "SUB_PROJECT_START_DATE" DATE NOT NULL ENABLE,
         "SUB_PROJECT_END_DATE" DATE NOT NULL ENABLE,
          "SUB_PROJECT_NAME" VARCHAR2(50),
          CONSTRAINT "PRJ_PROJECT_DETAIL_PK" PRIMARY KEY ("SUB_PROJECT_ID")
    USING INDEX  ENABLE
    )
       /
         ALTER TABLE  "PROJECT_DETAIL" ADD CONSTRAINT "PRJ_PROJECT_DETAIL_FK1" FOREIGN KEY
         ("PROJECT_ID") REFERENCES  "PROJECTS_LIST" ("PROJECT_ID") ENABLE
```

```
                        /
                        ALTER TABLE  "PROJECT_DETAIL" ADD CONSTRAINT "PRJ_PROJECT_DETAIL_FK2" FOREIGN KEY
                        ("MANAGER") REFERENCES  "CONSULTANTS" ("CONSULTANT_ID") ENABLE
                        /
    06) PROJECT_REQ_SKILL
        CREATE TABLE  "PROJECT_REQ_SKILL"
            (        "SUB_PROJECT_ID" VARCHAR2(4) NOT NULL ENABLE,
                     "SKILL_ID" NUMBER(2,0) NOT NULL ENABLE
            )
        /
        ALTER TABLE  "PROJECT_REQ_SKILL" ADD CONSTRAINT "PRJ_PROJECT_REQ_SKILL_FK1" FOREIGN KEY
        ("SUB_PROJECT_ID")
                    REFERENCES  "PROJECT_DETAIL" ("SUB_PROJECT_ID") ENABLE
        /
        ALTER TABLE  "PROJECT_REQ_SKILL" ADD CONSTRAINT "PRJ_PROJECT_REQ_SKILL_FK2" FOREIGN KEY
        ("SKILL_ID")
                    REFERENCES  "SKILLS_LIST" ("SKILL_ID") ENABLE
/
    07) CONSULTANT_SKILLSET
        CREATE TABLE  "CONSULTANT_SKILLSET"
            (        "CONSULTANT_ID" NUMBER(3,0) NOT NULL ENABLE,
                     "SKILL_ID" NUMBER(1,0) NOT NULL ENABLE,
                     "CERTIFICATION_ID" VARCHAR2(5) NOT NULL ENABLE
            )
        /
        ALTER TABLE  "CONSULTANT_SKILLSET" ADD CONSTRAINT "PRJ_CONSULTANT_FK1" FOREIGN KEY
        ("CONSULTANT_ID")
            REFERENCES  "CONSULTANTS" ("CONSULTANT_ID") ENABLE
        /
        ALTER TABLE  "CONSULTANT_SKILLSET" ADD CONSTRAINT "PRJ_CONSULTANT_SKILLSET_CON_F3" FOREIGN
        KEY ("CERTIFICATION_ID")
            REFERENCES  "SKILL_CERIFICATION" ("CERTIFICATION_ID") ENABLE
        /
        ALTER TABLE  "CONSULTANT_SKILLSET" ADD CONSTRAINT "PRJ_CONSULTANT_SKILLSET_FK2" FOREIGN KEY
        ("SKILL_ID")
            REFERENCES  "SKILLS_LIST" ("SKILL_ID") ENABLE
        /

    08) SKILL_CERIFICATION
        CREATE TABLE  "SKILL_CERIFICATION"
            (        "CERTIFICATION_ID" VARCHAR2(5) NOT NULL ENABLE,
                     "SKILL_ID" NUMBER(1,0),
                     "CERTIFIED_BY" VARCHAR2(15),
                     "CERIFICATION_FLAG" VARCHAR2(1) NOT NULL ENABLE,
                      CONSTRAINT "SKILL_CERIFICATION_PK" PRIMARY KEY ("CERTIFICATION_ID")
            USING INDEX  ENABLE
            )
        /
        ALTER TABLE  "SKILL_CERIFICATION" ADD CONSTRAINT "SKILL_CERIFICATION_FK2" FOREIGN KEY
        ("CERIFICATION_FLAG")
            REFERENCES  "CERTIFICATION_LOOKUP" ("CERIFICATION_FLAG") ENABLE
        /
        ALTER TABLE  "SKILL_CERIFICATION" ADD CONSTRAINT "SKILL_CERTIFICATION_FK1" FOREIGN KEY
        ("SKILL_ID")
            REFERENCES  "SKILLS_LIST" ("SKILL_ID") ENABLE
        /

    09) CERTIFICATION_LOOKUP
        CREATE TABLE  "CERTIFICATION_LOOKUP"
            (        "CERIFICATION_FLAG" VARCHAR2(1) NOT NULL ENABLE,
                     "CERTIFICATION_STATUS" VARCHAR2(25),
                      CONSTRAINT "CERTIFICATION_LOOKUP_PK" PRIMARY KEY ("CERIFICATION_FLAG")
            USING INDEX  ENABLE
            )
```

```
                /

10) EFFORTS_LOG
    CREATE TABLE  "EFFORTS_LOG"
        (           "CONSULTANT_ID" NUMBER(3,0) NOT NULL ENABLE,
                    "SUB_PROJECT_ID" VARCHAR2(4),
                    "MTH_ID" VARCHAR2(3),
                    "WK_ID" VARCHAR2(2),
                    "YR_ID" VARCHAR2(2),
                    "EFFORTS_LOGGED" NUMBER(5,0)
        )
    /
    ALTER TABLE  "EFFORTS_LOG" ADD CONSTRAINT "EFFORTS_LOG_FK1" FOREIGN KEY ("CONSULTANT_ID")
        REFERENCES  "CONSULTANTS" ("CONSULTANT_ID") ENABLE
    /
    ALTER TABLE  "EFFORTS_LOG" ADD CONSTRAINT "EFFORTS_LOG_FK2" FOREIGN KEY ("SUB_PROJECT_ID")
        REFERENCES  "PROJECT_DETAIL" ("SUB_PROJECT_ID") ENABLE
    /
    ALTER TABLE  "EFFORTS_LOG" ADD CONSTRAINT "EFFORTS_LOG_FK3" FOREIGN KEY ("MTH_ID")
        REFERENCES  "MONTH_LOOKUP" ("MTH_ID") ENABLE
    /
    ALTER TABLE  "EFFORTS_LOG" ADD CONSTRAINT "EFFORTS_LOG_FK4" FOREIGN KEY ("WK_ID")
        REFERENCES  "WEEKS_LOOKUP" ("WK_ID") ENABLE
    /
    ALTER TABLE  "EFFORTS_LOG" ADD CONSTRAINT "EFFORTS_LOG_FK5" FOREIGN KEY ("YR_ID")
        REFERENCES  "YEARS_LOOKUP" ("YR_ID") ENABLE
    /
11) YEARS_LOOKUP
    CREATE TABLE  "YEARS_LOOKUP"
        (           "YR_ID" VARCHAR2(2) NOT NULL ENABLE,
                    "YEAR" NUMBER(4,0),
                     CONSTRAINT "YEARS_PK" PRIMARY KEY ("YR_ID")
        USING INDEX  ENABLE
        )
    /

12) MONTH_LOOKUP
    CREATE TABLE  "MONTH_LOOKUP"
        (           "MTH_ID" VARCHAR2(3) NOT NULL ENABLE,
        "MONTH" VARCHAR2(3) NOT NULL ENABLE,
        CONSTRAINT "MONTH_LOOKUP_PK" PRIMARY KEY ("MTH_ID")
        USING INDEX  ENABLE
        )
    /
13) WEEKS_LOOKUP
    CREATE TABLE  "WEEKS_LOOKUP"
        (           "WK_ID" VARCHAR2(2) NOT NULL ENABLE,
        "WEEK" VARCHAR2(15),
        CONSTRAINT "WEEKS_PK" PRIMARY KEY ("WK_ID")
        USING INDEX  ENABLE
        )
    /
14) EVALUATION_CRITERIA
    CREATE TABLE  "EVALUATION_CRITERIA"
        (           "EVALUATION_ID" VARCHAR2(2) NOT NULL ENABLE,
                    "EVALUATION_SCORE" NUMBER(1,0) NOT NULL ENABLE,
                    "EVALUATION_RATING" CHAR(50) NOT NULL ENABLE,
                     CONSTRAINT "PRJ_EVALUATION_CRITERIA_PK" PRIMARY KEY ("EVALUATION_ID")
        USING INDEX  ENABLE
        )
    /
15) CONSULTANT_EVALUATION
     CREATE TABLE  "CONSULTANT_EVALUATION"
```

```
        ( "CONSULTANT_ID" NUMBER(3,0) NOT NULL ENABLE,
          "SUB_PROJECT_ID" VARCHAR2(4) NOT NULL ENABLE,
          "MANAGER" NUMBER(3,0) NOT NULL ENABLE,
          "EVALUATION_ID" VARCHAR2(2) NOT NULL ENABLE,
          "EVALUATION_DATE" DATE NOT NULL ENABLE,
          "EVALUATION_COMMENT" CHAR(200)
    )
/
ALTER TABLE  "CONSULTANT_EVALUATION" ADD CONSTRAINT "CONSULTANT_EVALUATION_CON_FK4" FOREIGN KEY
("EVALUATION_ID")
          REFERENCES  "EVALUATION_CRITERIA" ("EVALUATION_ID") ENABLE
/
ALTER TABLE  "CONSULTANT_EVALUATION" ADD CONSTRAINT "PRJ_CONSULTANT_EVALUATION_FK1" FOREIGN KEY
("CONSULTANT_ID")
          REFERENCES  "CONSULTANTS" ("CONSULTANT_ID") ENABLE
/
ALTER TABLE  "CONSULTANT_EVALUATION" ADD CONSTRAINT "PRJ_CONSULTANT_EVALUATION_FK2" FOREIGN KEY
("SUB_PROJECT_ID")
          REFERENCES  "PROJECT_DETAIL" ("SUB_PROJECT_ID") ENABLE
/
ALTER TABLE  "CONSULTANT_EVALUATION" ADD CONSTRAINT "PRJ_CONSULTANT_EVALUATION_FK3" FOREIGN KEY
("MANAGER")
          REFERENCES  "CONSULTANTS" ("CONSULTANT_ID") ENABLE
/
```

Question – 04(Insert Queries)

Table : CERTIFICATION_LOOKUP
INSERT INTO CERTIFICATION_LOOKUP VALUES ('Y','Done Certification')
INSERT INTO CERTIFICATION_LOOKUP VALUES ('N','Not Done Certification')

Table : CONSULTANT_EVALUATION
INSERT INTO CONSULTANT_EVALUATION VALUES (104,'SP2A',102,'E5','6/8/2018','Outstanding performance, greatly appreciated')
INSERT INTO CONSULTANT_EVALUATION VALUES (104,'SP3B',103,'E3','6/15/2018','Excellent performance, try to perform better to achieve the goals set')
INSERT INTO CONSULTANT_EVALUATION VALUES (105,'SP1A',101,'E2','6/30/2018','Needs improvement in the performance to accomplish the deadlines')
INSERT INTO CONSULTANT_EVALUATION VALUES (105,'SP1B',101,'E5','6/9/2018','Outstanding performance, greatly appreciated')
INSERT INTO CONSULTANT_EVALUATION VALUES (105,'SP3B',103,'E4','6/30/2018','Performed above the requirements of the project')
INSERT INTO CONSULTANT_EVALUATION VALUES (105,'SP4A',100,'E4','6/11/2018','Performed above the requirements of the project')
INSERT INTO CONSULTANT_EVALUATION VALUES (106,'SP2A',102,'E4','6/12/2019','Performed above the requirements of the project')
INSERT INTO CONSULTANT_EVALUATION VALUES (106,'SP3A',103,'E3','6/16/2018','Excellent performance, try to perform better to achieve the goals set')
INSERT INTO CONSULTANT_EVALUATION VALUES (107,'SP1A',101,'E3','6/17/2018','Excellent performance, try to perform better to achieve the goals set')
INSERT INTO CONSULTANT_EVALUATION VALUES (107,'SP3B',103,'E4','6/13/2018','Performed above the requirements of the project')

INSERT INTO CONSULTANT_EVALUATION VALUES (107,'SP4A,'100,'E2','6/30/2018','Needs improvement in the performance to accomplish the deadlines')

Table: CONSULTANT_SKILLSET
INSERT INTO CONSULTANT_SKILLSET VALUES (100,4,'4CYT')
INSERT INTO CONSULTANT_SKILLSET VALUES (100,5,'0ND')
INSERT INTO CONSULTANT_SKILLSET VALUES (100,7,'7CYDB')
INSERT INTO CONSULTANT_SKILLSET VALUES (100,1,'0ND')
INSERT INTO CONSULTANT_SKILLSET VALUES (101,1,'1CYJ')
INSERT INTO CONSULTANT_SKILLSET VALUES (101,2,'0ND')
INSERT INTO CONSULTANT_SKILLSET VALUES (101,3,'3CYF')
INSERT INTO CONSULTANT_SKILLSET VALUES (101,4,'4CYT')
INSERT INTO CONSULTANT_SKILLSET VALUES (102,1,'1CYJ')
INSERT INTO CONSULTANT_SKILLSET VALUES (102,2,'2CYM')
INSERT INTO CONSULTANT_SKILLSET VALUES (102,3,'0ND')
INSERT INTO CONSULTANT_SKILLSET VALUES (102,4,'4CYT')
INSERT INTO CONSULTANT_SKILLSET VALUES (103,1,'0ND')
INSERT INTO CONSULTANT_SKILLSET VALUES (103,2,'2CYM')
INSERT INTO CONSULTANT_SKILLSET VALUES (103,3,'3CYF')
INSERT INTO CONSULTANT_SKILLSET VALUES (103,4,'4CYT')
INSERT INTO CONSULTANT_SKILLSET VALUES (104,1,'1CYJ')
INSERT INTO CONSULTANT_SKILLSET VALUES (104,2,'2CYM')
INSERT INTO CONSULTANT_SKILLSET VALUES (104,3,'3CYF')
INSERT INTO CONSULTANT_SKILLSET VALUES (104,4,'4CYT')
INSERT INTO CONSULTANT_SKILLSET VALUES (105,1,'1CYJ')
INSERT INTO CONSULTANT_SKILLSET VALUES (105,2,'2CYM')
INSERT INTO CONSULTANT_SKILLSET VALUES (105,3,'3CYF')
INSERT INTO CONSULTANT_SKILLSET VALUES (105,4,'4CYT')
INSERT INTO CONSULTANT_SKILLSET VALUES (106,1,'1CYJ')
INSERT INTO CONSULTANT_SKILLSET VALUES (106,2,'2CYM')
INSERT INTO CONSULTANT_SKILLSET VALUES (106,3,'3CYF')
INSERT INTO CONSULTANT_SKILLSET VALUES (106,7,'0ND')
INSERT INTO CONSULTANT_SKILLSET VALUES (106,8,'8CYDN')
INSERT INTO CONSULTANT_SKILLSET VALUES (107,1,'1CYJ')
INSERT INTO CONSULTANT_SKILLSET VALUES (107,2,'2CYM')
INSERT INTO CONSULTANT_SKILLSET VALUES (107,3,'3CYF')
INSERT INTO CONSULTANT_SKILLSET VALUES (107,4,'4CYT')
INSERT INTO CONSULTANT_SKILLSET VALUES (107,5,'5CYC')
INSERT INTO CONSULTANT_SKILLSET VALUES (107,7,'7CYDB')
INSERT INTO CONSULTANT_SKILLSET VALUES (108,5,'0ND')
INSERT INTO CONSULTANT_SKILLSET VALUES (108,7,'7CYDB')

INSERT INTO CONSULTANT_SKILLSET VALUES (108,8,'8CYDN')
INSERT INTO CONSULTANT_SKILLSET VALUES (109,8,'0ND')
INSERT INTO CONSULTANT_SKILLSET VALUES (110,7,'7CYDB')

Table : CONSULTANTS
INSERT INTO CONSULTANTS VALUES (100,'Mark','Meyers','2417 Cherlkoe Street','San Fransisco','California',94088)
INSERT INTO CONSULTANTS VALUES (101,'Zach','Mary','123 Charlotte Street','Denton','Texas',76201)
INSERT INTO CONSULTANTS VALUES (102,'Alison','Wilson','945 Praire Street','Tulsa','Oklahoma',74105)
INSERT INTO CONSULTANTS VALUES (103,'Jackie','Nick','112 Stella Street','Dayton','Ohio',45377)
INSERT INTO CONSULTANTS VALUES (104,'Sara','Val','7690 Hickory Street','Detroit','Michigan',48127)
INSERT INTO CONSULTANTS VALUES (105,'Anna','Thomas','9087 Thomas Street','San Jose','California',94088)
INSERT INTO CONSULTANTS VALUES (106,'John','Jorge','0234 Bernard Street','Fremont','California',94536)
INSERT INTO CONSULTANTS VALUES (107,'Samuel','Greet','0123 Tulsa Street','Jessup','Pennsylvania',18434)
INSERT INTO CONSULTANTS VALUES (108,'Samson','Mercy','7605 Pama Street','Frisco','Texas',75033)
INSERT INTO CONSULTANTS VALUES (109,'David','Moul','0698 Dayton Street','Dover','New Hampshire',3820)
INSERT INTO CONSULTANTS VALUES (110,'Pierre','Parly','456 Fry Street','West Des Moines','Iowa',50266)

Table :EFFORTS_LOG
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M1','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M1','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M1','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M1','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M2','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M2','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M2','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M2','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M3','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M3','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M3','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M3','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M1','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M1','W2','Y2',40)
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INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M1','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M2','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M2','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M2','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M2','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M3','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M3','W2','Y2',20)

```
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M3','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M3','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1A','M3','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1A','M3','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1A','M3','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1A','M3','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (107,'SP1A','M3','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (107,'SP1A','M3','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (107,'SP1A','M3','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (107,'SP1A','M3','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M3','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M3','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M3','W3','Y2',20)
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INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M4','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M4','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M5','W1','Y2',40)
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INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M1','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M1','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M2','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M2','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M2','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M2','W3','Y2',40)
```

```sql
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M3','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M3','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1A','M3','W3','Y2',20)
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INSERT INTO EFFORTS_LOG VALUES (104,'SP1A','M1','W2','Y2',40)
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INSERT INTO EFFORTS_LOG VALUES (107,'SP1A','M3','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (107,'SP1A','M3','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M3','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M3','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M3','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M3','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M4','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M4','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M4','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M4','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M5','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M5','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M5','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (101,'SP1B','M5','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M3','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M3','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M3','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M3','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M4','W2','Y2',20)
```

```
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M5','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M5','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M5','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP1B','M5','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (102,'SP2A','M3','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (102,'SP2A','M3','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (102,'SP2A','M3','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (102,'SP2A','M3','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (102,'SP2A','M4','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (102,'SP2A','M4','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (102,'SP2A','M4','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (102,'SP2A','M4','W4','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (104,'SP2A','M3','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP2A','M3','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP2A','M3','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP2A','M3','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP2A','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP2A','M4','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP2A','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP2A','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (106,'SP2A','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (106,'SP2A','M4','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (106,'SP2A','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (106,'SP2A','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (106,'SP3A','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (106,'SP3A','M4','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (106,'SP3A','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (106,'SP3A','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3A','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3A','M4','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3A','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3A','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3B','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3B','M4','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3B','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3B','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3B','M5','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3B','M5','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3B','M5','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (103,'SP3B','M5','W4','Y2',40)
```

INSERT INTO EFFORTS_LOG VALUES (104,'SP3B','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP3B','M4','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP3B','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (104,'SP3B','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP3B','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP3B','M4','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP3B','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP3B','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP3B','M4','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP3B','M4','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP3B','M4','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP3B','M4','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP3B','M5','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP3B','M5','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP3B','M5','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP3B','M5','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP4A','M5','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP4A','M5','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP4A','M5','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (105,'SP4A','M5','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP4A','M5','W1','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP4A','M5','W2','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP4A','M5','W3','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (107,'SP4A','M5','W4','Y2',20)
INSERT INTO EFFORTS_LOG VALUES (100,'SP4A','M5','W1','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (100,'SP4A','M5','W2','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (100,'SP4A','M5','W3','Y2',40)
INSERT INTO EFFORTS_LOG VALUES (100,'SP4A','M5','W4','Y2',40)

Table: EVALUATION_CRITERIA
INSERT INTO EVALUATION_CRITERIA VALUES ('E1',1,'Needs Improvement')
INSERT INTO EVALUATION_CRITERIA VALUES ('E2',2,'Strong')
INSERT INTO EVALUATION_CRITERIA VALUES ('E3',3,'Excellent')
INSERT INTO EVALUATION_CRITERIA VALUES ('E4',4,'Beyond Expectation')
INSERT INTO EVALUATION_CRITERIA VALUES ('E5',5,'Outstanding')

Table: MONTH_LOOKUP
INSERT INTO MONTH_LOOKUP VALUES ('M1','Jan')
INSERT INTO MONTH_LOOKUP VALUES ('M2','Feb')
INSERT INTO MONTH_LOOKUP VALUES ('M3','Mar')
INSERT INTO MONTH_LOOKUP VALUES ('M4','Apr')

INSERT INTO MONTH_LOOKUP VALUES ('M5','May')
INSERT INTO MONTH_LOOKUP VALUES ('M6','Jun')
INSERT INTO MONTH_LOOKUP VALUES ('M7','Jul')
INSERT INTO MONTH_LOOKUP VALUES ('M8','Aug')
INSERT INTO MONTH_LOOKUP VALUES ('M9','Sep')
INSERT INTO MONTH_LOOKUP VALUES ('M10','Oct')
INSERT INTO MONTH_LOOKUP VALUES ('M11','Nov')
INSERT INTO MONTH_LOOKUP VALUES ('M12','Dec')

Table :PRJ_CLIENTS_LIST
INSERT INTO PRJ_CLIENTS_LIST VALUES ('C1','Invesco','T001','654-097-2314')
INSERT INTO PRJ_CLIENTS_LIST VALUES ('C2','Infiniti','I015','265-080-7689')
INSERT INTO PRJ_CLIENTS_LIST VALUES ('C3','Broadridge','B089','165-932-1764')

Table :PROJECT_DETAIL
INSERT INTO PROJECT_DETAIL VALUES ('SP1A','P1',101,'9/1/2018','3/30/2018','Sales Consultative Services')
INSERT INTO PROJECT_DETAIL VALUES ('SP1B','P1',101,'3/1/2018','5/30/2018','Master Data Management - Products')
INSERT INTO PROJECT_DETAIL VALUES ('SP2A','P2',102,'3/1/2018','4/30/2018','Network and Telecommunications')
INSERT INTO PROJECT_DETAIL VALUES ('SP3A','P3',103,'4/1/2018','4/30/2018','Super Stores')
INSERT INTO PROJECT_DETAIL VALUES ('SP3B','P3',103,'4/1/2018','5/30/2018','Datawarehouse distribution - rds')
INSERT INTO PROJECT_DETAIL VALUES ('SP4A','P4',100,'5/1/2018','5/30/2018','Third Party Asset Management')

Table: PROJECT_REQ_SKILL
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP1A',1)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP1A',2)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP1A',3)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP1A',4)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP1B',1)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP1B',2)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP2A',3)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP2A',1)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP2A',2)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP3A',1)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP3A',2)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP3B',2)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP3B',3)
INSERT INTO PROJECT_REQ_SKILL VALUES ('SP3B',4)

INSERT INTO PROJECT_REQ_SKILL VALUES ('SP4A',4)

Table: PROJECTS_LIST
INSERT INTO PROJECTS_LIST VALUES ('P1','Sales','C1','9/1/2018','12/31/2020')
INSERT INTO PROJECTS_LIST VALUES ('P2','Infra','C2','3/15/2019','3/14/2021')
INSERT INTO PROJECTS_LIST VALUES('P3','Retail','C1','12/18/2019','2/28/2022')
INSERT INTO PROJECTS_LIST VALUES ('P4','Finance','C3','6/20/2020','5/31/2021')

Table :SKILL_CERTIFICATION
INSERT INTO SKILL_CERTIFICATION VALUES ('1CYJ',1,'L&T Corp','Y')
INSERT INTO SKILL_CERTIFICATION VALUES ('2CYM',2,'Tech Corp','Y')
INSERT INTO SKILL_CERTIFICATION VALUES ('3CYF',3,'IIM','Y')
INSERT INTO SKILL_CERTIFICATION VALUES ('4CYT',4,'Teradata corp','Y')
INSERT INTO SKILL_CERTIFICATION VALUES ('5CYC',5,'TPF corp','Y')
INSERT INTO SKILL_CERTIFICATION VALUES ('7CYDB',7,'Oracle corp','Y')
INSERT INTO SKILL_CERTIFICATION VALUES ('8CYDN',8,'.Net Corp','Y')
INSERT INTO SKILL_CERTIFICATION VALUES ('0ND','','','Y')

Table : SKILLS_LIST
INSERT INTO SKILLS_LIST VALUES (1,'JAVA')
INSERT INTO SKILLS_LIST VALUES (2,'Mainframe')
INSERT INTO SKILLS_LIST VALUES (3,'Finance')
INSERT INTO SKILLS_LIST VALUES (4,'Teradata')
INSERT INTO SKILLS_LIST VALUES (5,'COBOL')
INSERT INTO SKILLS_LIST VALUES (7,'DB2')
INSERT INTO SKILLS_LIST VALUES (8,'.Net')

Table: WEEKS_LOOKUP
INSERT INTO WEEKS_LOOKUP VALUES ('W1','1st Week')
INSERT INTO WEEKS_LOOKUP VALUES ('W2','2nd Week')
INSERT INTO WEEKS_LOOKUP VALUES ('W3','3rd Week')
INSERT INTO WEEKS_LOOKUP VALUES ('W4','4th Week')

Table: YEARS_LOOKUP
INSERT INTO YEARS_LOOKUP VALUES ('Y1',2017)
INSERT INTO YEARS_LOOKUP VALUES('Y2',2018)
INSERT INTO YEARS_LOOKUP VALUES('Y3',2019)
INSERT INTO YEARS_LOOKUP VALUES('Y4',2020)

Assignment Queries

4a) . Retrieve the name of each city where a consultant lives. Suppress duplicate output and display the values in alphabetical order;

Query:

```
select distinct CONSULTANT_CITY
from CONSULTANTS
order by CONSULTANT_CITY asc;
```

Query Results affected in the table :

CONSULTANT_CITY
Dayton
Denton
Detroit
Dover
Fremont
Frisco
Jessup
San Jose
San fransisco
Tulsa
West Des Moines

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose ' 4a').

4b) . Retrieve the consultant id, skill id and certification status for every consultant who is proficient with skill ID 1, 2, or 3;

Query:

```
SELECT CS.CONSULTANT_ID,CS.SKILL_ID,SCR.CERIFICATION_FLAG,CERTIFICATION_STATUS
FROM SKILL_CERIFICATION SCR
INNER JOIN
CONSULTANT_SKILLSET CS
ON CS.CERTIFICATION_ID = SCR.CERTIFICATION_ID
inner join CERTIFICATION_LOOKUP CL
ON CL.CERIFICATION_FLAG = SCR.CERIFICATION_FLAG
WHERE CS.SKILL_ID IN (1,2,3);
```

Query Results:

CONSULTANT_ID	SKILL_ID	CERIFICATION_FLAG	CERTIFICATION_STATUS
100	1	N	Not Done Certification
101	1	Y	Done Certification
101	2	N	Not Done Certification
101	3	Y	Done Certification
102	1	Y	Done Certification
102	2	Y	Done Certification
102	3	N	Not Done Certification
103	1	N	Not Done Certification
103	2	Y	Done Certification
103	3	Y	Done Certification
104	1	Y	Done Certification
104	2	Y	Done Certification
104	3	Y	Done Certification
105	1	Y	Done Certification
105	2	Y	Done Certification
105	3	Y	Done Certification
106	1	Y	Done Certification
106	2	Y	Done Certification
106	3	Y	Done Certification
107	1	Y	Done Certification
107	2	Y	Done Certification
107	3	Y	Done Certification

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4b'**).

4c) . Retrieve the first and last names of those consultants whose last names begin with an "M";

Query:

> select CONSULTANT_FIRSTNAME as **FIRSTNAME**,CONSULTANT_LASTNAME AS
> **LASTNAME**
> from **CONSULTANTS**
> where CONSULTANT_LASTNAME **like 'M%';**

Query Results:

FIRSTNAME	LASTNAME
Mark	Meyers
Zach	Mary
Samson	Mercy
David	Moul

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4C'**).

4d) . Retrieve the last name of each consultant and the name of each project they work on (it's ok to have duplicate consultant names);

Query:

```
select
        C.CONSULTANT_LASTNAME as LastName,
        PD.SUB_PROJECT_NAME As Project
 from CONSULTANT_EVALUATION CE
Inner join
PROJECT_DETAIL PD
 on CE.SUB_PROJECT_ID = PD.SUB_PROJECT_ID
INNER JOIN
CONSULTANTS C
ON CE.CONSULTANT_ID = C.CONSULTANT_ID
UNION
 SELECT
        C.CONSULTANT_LASTNAME as LastName,
         PD1.SUB_PROJECT_NAME as Project
FROM PROJECT_DETAIL PD1
INNER JOIN
CONSULTANTS C
ON PD1.MANAGER = C.CONSULTANT_ID
;
```

Query Results:

LASTNAME	PROJECT
Mary	Master Data Management - Products
Mary	Sales Consultative Services
Meyers	Third Party Asset Management

greet	Datawarehouse distribution - rds
greet	Sales Consultative Services
greet	Third Party Asset Management
jorge	Network and Telecommunications
jorge	Super Stores
nick	Datawarehouse distribution - rds
nick	Super Stores
thomas	Datawarehouse distribution - rds
thomas	Master Data Management - Products
thomas	Sales Consultative Services
thomas	Third Party Asset Management
val	Datawarehouse distribution - rds
val	Network and Telecommunications
wilson	Network and Telecommunications

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4d'**).

4e) . List the first and last name of every consultant who has worked with Mark Meyers (use a subquery);

Query:

Select CONSULTANT_FIRSTNAME as **FIRSTNAME** ,
        CONSULTANT_LASTNAME as **LASTNAME**
from CONSULTANTS
where **CONSULTANT_ID** in
        (select **CONSULTANT_ID**
        from CONSULTANT_EVALUATION
        where **SUB_PROJECT_ID** in
                (select **SUB_PROJECT_ID** from
                        PROJECT_DETAIL
                        where MANAGER =
                                (select
                                CONSULTANT_ID
                                from CONSULTANTS
                                where CONSULTANT_FIRSTNAME = 'Mark'
                                and   CONSULTANT_LASTNAME = 'Meyers')));

Query Results:

FIRSTNAME	LASTNAME
Anna	thomas
Samuel	greet

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4e'**).

4f) . Display each project id and the total number of hours that all consultants have spent on that project (only display data for projects that have accumulated over 100 hours);

Query:

```
select
 SUB_PROJECT_ID as PROJECT_ID,
 sum(EFFORTS_LOGGED) as Totalhrs
 from EFFORTS_LOG
 group by SUB_PROJECT_ID
 having sum(EFFORTS_LOGGED) > 100
 order by SUB_PROJECT_ID asc;
```

Query Results:

PROJECT_ID	TOTALHRS
SP1A	2080
SP1B	1280
SP2A	560
SP3A	160
SP3B	560
SP4A	320

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4f'**).

4g) . Develop your own query that uses an outer join;

Question : List all Consulatnt information(**CONSULTANT_ID, CONSULTANT_FIRSTNAME, CONSULTANT_LASTNAME)** and assign the projectName who are managers among all consultants.

Query:

```
select
 c.CONSULTANT_ID,
 c.CONSULTANT_FIRSTNAME,
 c.CONSULTANT_LASTNAME,
```

p.SUB_PROJECT_NAME
            from CONSULTANTS c
            <mark>Left outer join</mark>
            PROJECT_DETAIL p
            on c.CONSULTANT_ID = p.MANAGER
            order by c.CONSULTANT_ID asc;
Query results: (Consultant_ID = 100,101,102,103 are managers which assigned to multiple projects)

CONSULTANT_ID	CONSULTANT_FIRSTNAME	CONSULTANT_LASTNAME	SUB_PROJECT_NAME
100	Mark	Meyers	Third Party Asset Management
101	Zach	Mary	Master Data Management - Products
101	Zach	Mary	Sales Consultative Services
102	Alison	wilson	Network and Telecommunications
103	Jackie	nick	Super Stores
103	Jackie	nick	Datawarehouse distribution - rds
104	Sara	val	
105	Anna	thomas	
106	John	jorge	
107	Samuel	greet	
108	Samson	Mercy	
109	David	Moul	
110	Pierre	parly	

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4g'**).

<mark>4h)</mark> . Develop your own query that uses a group by with the having clause

 Question : To list the total number of consultants working in each project_id excluding managers.

Query :

        select
        SUB_PROJECT_ID as PROJECT_ID,
        Count(CONSULTANT_ID) as ToT_consultants
        from CONSULTANT_EVALUATION
        group by SUB_PROJECT_ID
        having Count(CONSULTANT_ID) > 1
        order by SUB_PROJECT_ID asc;

Query Results:

PROJECT_ID	TOT_CONSULTANTS
SP1A	2
SP2A	2
SP3B	3
SP4A	2

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4h'**).

4i) Develop your own query that uses the LIKE keyword.
 Question : To list the consultant id ,FirstName whose FirstName ends with either a or h.
Query:

        select
         CONSULTANT_ID,
         CONSULTANT_FIRSTNAME
         from CONSULTANTS
         where CONSULTANT_FIRSTNAME like '%a' or CONSULTANT_FIRSTNAME like '%h'
         ;

QueryResults:

CONSULTANT_ID	CONSULTANT_FIRSTNAME
101	Zach
104	Sara
105	Anna

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4i'**).

4j) . Develop your own query that uses the DISTINCT keyword..
 Question : To list count of unique consultant_id from the table **CONSULTANT_EVALUATION**

Before use of DISTINCT kEYWORD
        select count(CONSULTANT_ID)
        from CONSULTANT_EVALUATION;

QueryResults:

COUNT(CONSULTANT_ID)
11

With DISTINCT kEYWORD
        select count(distinct CONSULTANT_ID)
        from CONSULTANT_EVALUATION;
QueryResults:

COUNT(DISTINCTCONSULTANT_ID)
4

Note : In the Oracle Apex portal , the above query is saved in the below path.

SQL Workshop ⟶ SQL Commands ⟶ Saved SQL ⟶ Name Column (Choose **'4j'**).